TECHNICAL SUPPORT DOCUMENT

TECHNICAL INFORMATION PRESENTED IN REVIEW OF AN
APPLICATION FOR A PART 70 OPERATING PERMIT

APPLICATION SUBMITTED BY

Nevada Power Company dba NV Energy

For

Walter M. Higgins III Generating Station

Part 70 Operating Permit Number: 1550
(Renewal)

SIC Code - 4911: Electric Utility Services

Clark County
Department of Air Quality and Environmental Management
Permitting Section

December, 2010

This Technical Support Document (TSD) accompanies the proposed Part 70 Operating Permit for Walter M. Higgins III Generating Station.

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emissions Monitoring System
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CTG	Combustion Turbine-Generator
DAQEM	Clark County Department of Air Quality & Environmental Management
DLN	Dry Low-NO_x
EPA	United States Environmental Protection Agency
EU	Emission Unit
HAP	Hazardous Air Pollutant
HHV	Higher Heating Value
HP	Horse Power
kW	kilowatt
LHV	Lower Heating Value
MACT	Maximum Achievable Control Technology
MMBtu	Millions of British Thermal Units
M/N	Model Number
MW	Megawatt
NAICS	North American Industry Classification System
NO_x	Nitrogen Oxides
NRS	Nevada Revised Statutes
OP	Operating Permit
PM_{10}	Particulate Matter less than 10 microns
ppm	Parts per Million
ppmvd	Parts per Million, Volumetric Dry
PTE	Potential to Emit
QA/AC	Quality Assurance/Quality Control
RATA	Relative Accuracy Test Audits
RICE	Reciprocating Internal Combustion Engine
RMP	Risk Management Plan
SCC	Source Classification Codes
scf	Standard Cubic Feet
SIC	Standard Industrial Classification
SIP	State Implementation Plan
S/N	Serial Number
SO_2	Sulfur Dioxide
SO_x	Sulfur Oxides
TCS	Toxic Chemical Substance
ULN	Ultra Low-NO_x
VOC	Volatile Organic Compound

II. EXECUTIVE SUMMARY

Walter M. Higgins III Generating Station is an electric power generating plant located at 1275 East Primm Boulevard, Primm, Nevada 89019 in the North Ivanpah Valley airshed, hydrographic basin number 164A, which is designated as nonattainment for 8-hour ozone (NO_X and VOC are precursors) and attainment for all other regulated pollutants.

All processes at the site are grouped under SIC 4911 – Electric Services and NAICS 221112 – Fossil Fuel Electric Power Generation.

The following table summarizes the source PTE for each regulated air pollutant for all emission units addressed by this Part 70 operating permit:

PM_{10}	NO_X	CO	SO_X	VOC	HAP
144.91	**157.91**	**194.07**	**10.52**	**43.51**	**10.44**

Walter M. Higgins III Generating Station is a major source of PM_{10}, NO_X and CO and a minor source of SO_X, VOC and HAP.

The previous renewal for the Part 70 OP was issued on November 8, 2005. This Part 70 OP is issued based on the Title V modification application submitted on May 4, 2007, supplemental information submitted on November 14, 2009, and the Title V renewal application submitted on January 5, 2010.

Based on the information submitted by the applicant and a technical review performed by the DAQEM staff, the DAQEM proposes the renewal of a Part 70 Operating Permit to Nevada Power Company, Walter M. Higgins III Generating Station.

III. SOURCE INFORMATION

A. General

Permittee	Nevada Power Company dba NV Energy Walter M. Higgins III Generating Station
Mailing Address	6226 West Sahara Avenue, MS #30 Las Vegas, Nevada 89146
Contacts	Kevin Geraghty
Phone Number	(702) 402-5662
Fax Number	(702) 402-0835
Source Location	1275 East Primm Boulevard Primm, Nevada 89019
Hydrographic Area	164A
Township, Range, Section	T27S, R59E, Section 10
SIC Code	4911: Electric Services
NAICS Code	221112: Fossil Fuel Electric Power Generation

B. Description of Process

The facility has a two-on-one combined cycle configuration. The two-on-one unit consists of two natural gas-fired stationary gas turbines (EUs: A01 and A03), two Heat Recovery Steam Generators (HRSGs) with natural gas fired duct burners (EUs: A02 and A04) for supplemental firing and a steam turbine generator. The facility also operates one natural gas-fired auxiliary boiler (EU: A05) and one emergency fire pump (EU: A06). All fuel-fired equipment, with the exception of the diesel-fired emergency fire pump, uses pipeline quality natural gas as the sole fuel source.

C. Permitting History

Walter M. Higgins III Generating Station is regulated by the Clark County Department of Air Quality and Environmental Management (DAQEM) and has a Title V permit. The initial Part 70 Operating Permit was issued November 8, 2005.

Table III-C-1: Permits Issued to Walter M. Higgins III Generating Station

Date Issued	Permit Number	Description
04/09/2010	Modification 2, Revision 2	ATC revision incorporating a company and source name change and removal of source-wide PTE limit
10/06/2006	Modification 2, Revision 1	Minor changes in ATC permit language and correct typos
09/08/2006	Modification 2	Increase short term emissions in ATC

Date Issued	Permit Number	Description
11/08/2005	Modification 0, Revision 1	Issuance of Title V Operating Permit
11/15/2004	Modification 1, Revision 1	ATC Change of name and ownership from Reliant Energy Bighorn, LLC, to Reliant Energy Wholesale Generation, LLC
07/06/2004	Modification 1	Minor modification to ATC to accommodate as-built design changes for the auxiliary boiler
06/20/2003	Modification 0	Issuance of initial operating permit
10/01/2001	Modification 0	Issuance of initial authority to construct

On May 4, 2007, DAQEM received an application to revise the Part 70 OP. The source requested that DAQEM incorporate changes that had recently been made to the ATC including:

1. Increase the heat input rating of the two stationary gas turbines from 1,754 MMBtu/hr to 2,096 MMBtu/hr (and the corresponding power output from 159 MW to 175 MW) and update the short term emission limits accordingly.
2. Increase the heat input rating of the two duct burners from 650 MMBtu/hr to 700 MMBtu/hr and update the short term emission limits accordingly.
3. Decrease the annual hours of operation of the duct burners from 3,300 hours per year to 3,064 hours per year.

On November 8, 2008, DAQEM received supplemental information from the source requesting a Company and Source name change. The source requested that the Company name be changed from Reliant Energy Wholesale Generation, LLC, to Nevada Power Company dba NV Energy and the source name be changed from Bighorn Electric Generating Station to Walter M. Higgins III Generating Station.

On November 14, 2009, DAQEM received supplemental information from the source requesting that DAQEM remove the source-wide PTE limits from the permit.

On January 5, 2010, DAQEM received an application to renew the Part 70 OP expiring on November 8, 2010, and incorporate all changes from previous submittals described above.

Additionally, inconsistencies were found in the HAP emissions calculations. Emissions were recalculated and adjusted accordingly. The correct HAP PTE is 0.13 tons per year greater than the incorrect HAP PTE listed in the permit issued October 6, 2006.

Table III-C-2: BACT Determinations for Stationary Gas Turbine Units

EU	Description	BACT Technology	BACT Limit
A01/A02	175 MW Stationary Gas Turbine/HRSG, natural gas firing	SCR, dry low-NO_X burners, oxidation catalyst, natural gas combustion, inlet air filters	2.5 ppmvd NO_X and 5.0 ppmvd CO on a 3-hour average at 15 percent O_2
A03/A04	175 MW Stationary Gas Turbine/HRSG, natural gas firing	SCR, dry low-NO_X burners, oxidation catalyst, natural gas combustion, inlet air filters	2.5 ppmvd NO_X and 5.0 ppmvd CO on a 3-hour average at 15 percent O_2
A05	40 MMBtu/hr Auxiliary Boiler, natural gas firing	Low-NO_X burner	30 ppmvd NO_X and 100 ppmvd CO
A06	500 hp diesel emergency fire pump, diesel firing	Timing retard, turbocharging, aftercooling, low sulfur diesel fuel	NA

The application for this permit renewal was deemed complete on February 4, 2010. The Part 70 operating permit will be issued under the authority of AQR Section 12.5 (Adopted 05/18/2010/Effective 07/01/2010), consistent with the transition procedures identified in AQR Section 12.0 (Adopted 11/03/2009/Effective 07/01/2010).

D. Operating Scenario

Stationary Gas Turbine Generators

The stationary gas turbines are heavy duty, single shaft, and natural gas-fired units with a nominal energy production rating of 175 MW each. The heat input for each stationary gas turbine, based on the higher heating value of natural gas, is limited to 2,096 MMBtu/hr and 15,365,000 MMBtu/year (12-month rolling average). Determination of these heat input limits are based on operating and ambient conditions at full load, evaporative cooler on and 12 degrees Fahrenheit. There is no limit on the hours of operation of the stationary gas turbines.

Duct Burners

Heat input for each duct burner, based on the higher heating value of natural gas, is limited to 700 MMBtu/hr and 2,145,000 MMBtu/year (12-month rolling average). Determination of these heat input limits are based on operating and ambient conditions at full load and 108 degrees Fahrenheit. Each duct burner is permitted to operate up to an equivalent 3,064 hours equivalent full load at 108 degrees Fahrenheit at a maximum heat input per rolling 12-month period.

Auxiliary Boiler

Heat input for the auxiliary boiler, based on the higher heating value of natural gas, is limited to 40 MMBtu/hr and 100,000 MMBtu/year (12-month rolling average). Determination of these heat input limits are based on operating and ambient conditions at full load and 67 degrees Fahrenheit. The auxiliary boiler is permitted to operate up to an equivalent of 2,500 hours equivalent full load at 67 degrees Fahrenheit at a maximum heat input per rolling 12-month period.

Emergency Backup Fire Pump

The emergency engine-driven diesel fire pump is installed at the site to ensure the availability of fire-fighting water, even in the event of a power failure. The unit has a rating of 500 hp. This unit is permitted to operate up to 52 hours per year for testing and maintenance. There is no limit on the hours of operation in the event of an emergency.

E. Proposed Exemptions

No proposed exemptions.

IV. EMISSIONS INFORMATION

A. Total Source Potential to Emit

Table IV-A-1 reflects the sum of the PTEs of all permitted emission units. The source is major for PM_{10}, NO_X and CO and minor for SO_X, VOC and HAP.

Table IV-A-1: Total Source PTE (tons per rolling 12-months)

Pollutant	PM_{10}	NO_x	CO	SO_X	VOC	HAP
PTE Totals	144.91	157.91	194.07	10.52	43.51	10.44

Major Source Thresholds	**100**	**50**	**100**	**100**	**50**	**10/25[1]**

[1]25 tons for combination of all HAPs (no single HAP exceeds 10 tons).

B. Equipment Description

The air emission source equipment and associated major equipment are listed below.

Two (2) Westinghouse 501FD Stationary Gas Turbines
- 175 MW each
- Natural gas fired
- Inlet air filters with filter cleaning system
- EU Identification A01 and A03

Two (2) Duct Burners
- 700 MMBtu/hr
- Natural gas fired
- EU Identification A02 and A04

Auxiliary Boiler
- 40 MMBtu/hr
- Natural gas fired

Emergency Fire Pump
- 500 hp
- Diesel fired

C. Emission Units, Emission Limitations and PTE

The stationary source covered by this Part 70 OP is defined to consist of the emission units summarized in Table IV-C-1.

Table IV-C-1: Source Emission Units

EU	Description	Rating	Make	Model #	Serial #
A01	Stationary Gas Turbine, natural gas fired, MEQ = 175	175 MW	Westinghouse	501FD	---
A02	Duct Burner for HRSG associated with A01	700 MMBtu/hr	---	---	---
A03	Stationary Gas Turbine, natural gas fired, MEQ = 175	175 MW	Westinghouse	501FD	---
A04	Duct Burner for HRSG associated with A03	700 MMBtu/hr	---	---	---
A05	Auxiliary Boiler	40 MMBtu/hr	---	---	---
A06	Emergency Diesel Fire Pump	500 bhp	---	---	---

Stationary Gas Turbines and Duct Burners (EUs: A01/A02 and A03/A04)

Hourly emission limits for each stationary gas turbine are based on 100 percent load at 12°F which corresponds to a heat input rate of 2,096 MMBtu/hr (based on higher heating value of natural gas). Hourly limits for each duct burner are based on equivalent full load at 108°F which corresponds to a heat input rate of 700 MMBtu/hr (based on higher heating value of natural gas). Annual emission limits for each stationary gas turbine and each duct burner are based on fuel limitations (heat input rates) of 15,365,000 MMBtu and 2,145,000 MMBtu, respectively, per rolling 12-month period. HAP emissions are based on AP-42 emission factors (Table 3.1-3 for

turbines and Tables 1.4-3 and 1.4-4 for the duct burners). Formaldehyde is controlled through the use of an oxidation catalyst which provides an 85% control of its emissions.

Auxiliary Boiler (EU: A05)
Short term emissions from the boiler were based on AP-42 emission factors for all pollutants except CO and NO_X which were based on 100 ppm and 30 ppm, respectively. Annual emission rates were based on 2,500 hours of operation per year.

Emergency Fire Pump (EU: A06)
Short term emissions from the fire pump were provided by the source.

Table IV-C-2: Emission Unit PTE, Including Startups and Shutdowns (tons per rolling 12-months)[1]

EU	PM_{10}	NO_x	CO	SO_x	VOC	HAP
A01/A02	72.20	77.90	95.15	5.20	21.65	5.17
A03/A04	72.20	77.90	95.15	5.20	21.65	5.17
A05	0.50	1.80	3.70	0.03	0.20	0.09
A06	0.01	0.31	0.07	0.09	0.01	0.01
Total Source PTE	**144.91**	**157.91**	**194.07**	**10.52**	**43.51**	**10.44**

[1] Annual emissions based on fuel limitations of stationary gas turbine and duct burner of 15,365,000 MMBtu/yr and 2,145,000 MMBtu/yr, respectively.

Table IV-C-3: Emission Unit PTE, Excluding Startups and Shutdowns (pounds per hour)[1]

EU	PM_{10}	NO_x	CO	SO_x	VOC	HAP
A01/A02	21.10	25.70	31.38	1.68	9.90	2.14
A03/A04	21.10	25.70	31.38	1.68	9.90	2.14
A05	0.40	1.44	2.96	0.03	0.16	0.07
A06	0.35	12.00	2.75	3.24	0.32	0.23
Total Source PTE	**42.95**	**64.84**	**68.47**	**6.63**	**20.28**	**4.58**

[1] Emissions for each stationary gas turbine are based on 100 percent load at 12°F which corresponds to a heat input rate of 2,096 MMBtu/hr (HHV). Emissions for each duct burner are based on equivalent full load at 108°F which corresponds to a heat input rate of 700 MMBtu/hr.

Table IV-C-4: Emission Concentrations Excluding Startups and Shutdowns

EU	Averaging Period	O_2 Standard	NO_X (ppmvd)	CO (ppmvd)
A01/A02	3-Hour	15%	2.5	5.0
A03/A04	3-Hour	15%	2.5	5.0
A05	15-Minute	3%	30.0	100.0

The startup and shutdown emission rates listed in Table IV-C-5 are not federally enforceable limits. These values are to be used when CEMS data is not available. The Permittee shall include actual startup and shutdown emissions in the annual mass emission reporting.

Table IV-C-5: Startup and Shutdown Emissions (pounds per hour)[1]

EU	PM_{10}	NO_x	CO	SO_X	VOC
A01, A02, A03 & A04	34.40	157.40	1,303.00	1.40	193.60

[1] Emissions include contribution from HRSG units.

Table IV-C-6: Estimated Source HAP Emissions (tons per rolling 12-months)

Pollutant	Stationary Gas Turbines (EUs: A01 and A03 Combined)[1]	Duct Burners (EUs: A02 and A04 Combined)[2]	Auxiliary Boiler (EU: A05)[2]	Emergency Diesel Fire Pump (EU: A06)[3]
1,3 Butadiene	6.61E-03	---	---	3.56E-06
Acetaldehyde	6.15E-01	---	---	6.98E-05
Acrolein	9.83E-02	---	---	8.42E-06
Benzene	1.84E-01	4.42E-03	1.03E-04	8.49E-05
Ethylbenzene	4.92E-01	---	---	---
Formaldehyde	1.64E+00[4]	2.37E-02[4]	3.68E-03	1.07E-04
Naphthalene	2.00E-02	1.28E-03	2.99E-05	7.72E-06
PAH	3.38E-02	---	---	7.57E-06
Propylene Oxide	4.46E-01	---	---	---
Toluene	2.00E+00	7.15E-03	1.67E-04	3.72E-05
Xylenes	9.83E-01	---	---	2.59E-05
Polycyclic Organic Matter	---	1.85E-04	4.32E-06	---
Dichlorobenzene	---	2.52E-03	5.88E-05	---
Hexane	---	3.79E+00	8.82E-02	---
Arsenic Compounds	---	4.21E-04	9.80E-06	---
Beryllium Compounds	---	2.52E-05	5.88E-07	---
Cadmium Compounds	---	2.31E-03	5.39E-05	---
Chromium Compounds	---	2.94E-03	6.86E-05	---
Cobalt Compounds	---	1.77E-04	4.12E-06	---
Manganese Compounds	---	7.99E-04	1.86E-05	---
Mercury Compounds	--	5.47E-04	1.27E-05	--
Nickel Compounds	---	4.42E-03	1.03E-04	---
Selenium Compounds	---	5.05E-05	1.18E-06	---
HAP Emissions Total	**6.51**	**3.84**	**0.09**	**0.01**

[1] Emission factors from AP-42, Section 3.1-3.
[2] Emission factors from AP-42, Tables 1.4-3 and 1.4-4.
[3] Emission factors from AP-42, Table 3.3-2.
[4] Control Efficiency of 85 percent assumed for oxidation catalyst.

No single source-wide HAP emission shall exceed ten tons per year and total source-wide HAP emissions shall not exceed 25 tons per year. Therefore, this source is not subject to MACT for stationary gas turbines. The emergency fire pump is subject to a MACT standard (40 CFR 63, Subpart ZZZZ) since it is a reciprocating internal combustion engine operating at an area source of HAP emissions..

Table IV-C-7: Source Emissions

Pollutant	PM_{10}	NO_x	CO	SO_x	VOC	HAP
lbs/hour	**42.95**	**64.84**	**68.47**	**6.63**	**20.28**	**4.58**
tons/year	**144.91**	**157.91**	**194.07**	**10.52**	**43.51**	**10.44**

D. Testing

Performance testing is subject to 40 CFR 60 Subpart A, 40 CFR 60 Subpart GG, Subpart Da and Subpart Dc, 40 CFR 72 and DAQEM's Guideline of Performance Testing. Required testing will be performed using the following methods:

Table IV-D-1: Performance Testing Requirements for Stationary Gas Turbines

Test Point	Pollutant	Method (40 CFR 60, Appendix A)
Turbine Exhaust Outlet Stack	PM_{10}	Method 201/202 or 201A/202
Turbine Exhaust Outlet Stack	VOC	Method 25A
Turbine Exhaust Outlet Stack	NO_X	Chemiluminescence Analyzer (EPA Method 7E) or Method 20
Turbine Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Turbine Exhaust Outlet Stack	Opacity	EPA Method 9
Stack Gas Parameters	---	EPA Methods 1, 2, 3, 4

Subsequent performance testing of the stationary gas turbines and duct burners shall be conducted once every five years.

All performance tests for VOCs shall alternate between base load (duct burners off) and peak load (duct burners on) operational conditions.

Pursuant to AQR Section 49, the Permittee shall conduct performance testing on the auxiliary boiler in accordance with the following methods once every five years:

Table IV-D-2: Performance Testing Requirements for Auxiliary Boiler

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NOx	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10 analyzer
Boiler Exhaust Outlet Stack	Opacity	EPA Method 9
Stack Gas Parameters	-	EPA Methods 1, 2, 3A, and 4

E. Continuous Emissions Monitoring

To demonstrate continuous direct compliance with all emission limitations for NO_X and CO specified in this permit, the source operates a continuous emission monitoring system (CEMS) for NO_X, CO and O_2 on each stationary gas turbine unit in accordance with 40 CFR 60 and 75. The CEMS monitors and records the following parameters for each individual stationary gas turbine:

1. exhaust gas concentrations of NO_x, CO, and diluent O_2 including periods of startup and shutdown;
2. exhaust gas flow rate (by direct or indirect methods);
3. fuel flow rate;
4. hours of operation;
5. 3-hour rolling averages of NO_x and CO concentrations (in ppm);
6. hourly, daily and quarterly accumulated mass emissions of NO_x and CO; and
7. hours of downtime of the CEMS.

Emissions of NH_3 from each stationary gas turbine shall be monitored either by use of an NH_3 CEMS or NH_3 PEMS based on ammonia flow rate to the SCR and NO_X emissions monitoring data as approved by the Control Officer.

Compliance with all emission limitations for SO_X shall be demonstrated via certification of fuel sulfur analysis from the fuel oil supplier for each delivery or a quarterly certification from the natural gas supplier or gas testing analysis. The sulfur content shall not exceed a rolling 12-month average of 0.75 grains/100 dscf as determined by any four consecutive quarterly verifications.

Required periodic audit procedures and QA/QC procedures for CEMS shall conform to the provisions of 40 CFR 60, Appendix F. Relative accuracy test audits (RATA) of the CO, NO_X and O_2 CEMS shall be conducted at least annually.

V. REGULATORY REVIEW

DAQEM has determined that the following public law, statutes and associated regulations apply:
1. CAAA, Authority: 42 U.S.C. § 7401, et seq.;
2. Title 40 of the CFR;
3. NRS, Chapter 445B;
4. Portions of the AQR included in the SIP for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from ATC permits issued by DAQEM are federally enforceable because these permits were issued pursuant to SIP-included sections of the AQR; and
5. Portions of the AQR not included in the SIP. These locally applicable requirements are locally enforceable only.

A. Local Regulatory Requirements

The NRS and the CAAA are public laws that establish the general authority for the Regulations mentioned.

The DAQEM Part 70 (Title V) Program received Final Approval on November 30, 2001 with publication of that approval appearing in the Federal Register December 5, 2001 Vol. 66, No. 234. AQR Section 19 - Part 70 Operating Permits details the Clark County Part 70 Operating Permit Program. These regulations may be accessed on the Internet at: http://www.accessclarkcounty.com/depts/daqem/aq/rules/pages/regs.aspx

Local regulations contain sections that are federally enforceable and sections that are locally enforceable only. Locally enforceable only rules have not been approved by EPA for inclusion into the SIP. Requirements and conditions that appear in the Part 70 Operating Permit which are related only to non-SIP rules are notated below as locally enforceable only.

Table V-A-1: AQR Section 12 and 55 Summary Table for This Source (As Addressed by Part 70 OP)

	PM_{10}	NO_x	CO	SO_2	VOC	HAP
Air Quality Area	PSD	Basic nonattainment (ozone)	PSD	PSD	Basic nonattainment (ozone)	PSD
Source PTE (tpy)	144.91	157.91	194.07	10.52	43.51	10.44
Major Source	≥ 100 tpy	≥ 50 tpy	≥ 100 tpy	≥ 100 tpy	≥ 50 tpy	≥ 10 tpy for each HAP, or ≥ 25 tpy for combined HAPs

Discussion: Walter M. Higgins III is a major source of PM_{10}, NO_x and CO. As part of the original NSR Analysis all of these emissions triggered notice of proposed action.

Table V-A-2: Clark County DAQEM – AQR with Source Compliance or Requirement

Applicable Section – Title	Applicable Subsection - Title	SIP	Affected Emission Unit
0. Definitions	applicable definitions	yes	entire source
1. Definitions	applicable definitions – "Affected Facility", "Air Contaminant", "Air Pollution Control Committee", "Area Source", "Atmosphere", "Board", "Commercial Off-Road Vehicle Racing", "Dust", "Existing Facility", "Existing Gasoline Station", "Fixed Capital Cost", "Fumes", "Health District", "Hearing Board", "Integrated Sampling", "Minor Source", "Mist", "New Gasoline Station", "New Source", "NIC", "Point Source", "Shutdown", "Significant", "Single Source", "Smoke", "Source of Air Contaminant", "Special Mobile Equipment", "Standard Commercial Equipment", "Standard Conditions", "Start Up", "Stop Order", "Uncombined Water", and "Vapor Disposal System"	yes	entire source
2. Air Pollution Control Board	all subsections	yes	entire source
4. Control Officer	all subsections	yes	entire source
5. Interference with Control Officer	all subsections	yes	entire source
6. Injunctive Relief	all subsections	yes	entire source
8. Persons Liable for Penalties - Punishment: Defense	all subsections	yes	entire source
9. Civil Penalties	all subsections	yes	entire source
10. Compliance Schedule	when applicable; applicable subsections	yes	entire source
11. Ambient Air Quality Standards	applicable subsections	yes	entire source
Through June 30, 2010: 12. Preconstruction Review for New or Modified Stationary Sources (Amended 10/07/04)	All subsections <u>except</u> the following: 12.2.18 HAP Sources in Clark County. 12.2.20 Additional Requirements for STATIONARY SOURCEs with Beryllium, Mercury, Vinyl Chloride, or Asbestos EMISSIONS in Clark County	Yes except 12.2.18 and 12.2.20	entire source
Beginning July 1, 2010: 12.5. Part 70 Operating Permit Requirements	applicable subsections	yes	entire source
13. National Emission Standards for Hazardous Air Pollutants	CCAQR Section 13.2.85: Subpart ZZZZ National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	no	fire pump

14. New Source Performance Standards	CCAQR Section 14.1.46: Subpart GG Standards of Performance for Stationary Gas Turbines CCAQR Section 14.1.9: Subpart Da Standards of Performance for Electric Utility Steam Generating Units CCAQR Section 14.1.11: Subpart Dc - Standards of Performance for Industrial – Commercial – Institutional Steam Generating Units	no	Stationary Gas Turbines and auxiliary boiler
18. Permit and Technical Service Fees	18.1 Operating Permit Fees 18.2 Annual Emission Unit Fees 18.4 New Source Review Application Review Fee 18.5 Part 70 Application Review Fee 18.6 Annual Part 70 Emission Fee 18.14 Billing Procedures	yes	entire source
Through June 30, 2010: 19. Part 70 Operating Permit FEDERAL APPROVAL (11/25/01)	19.2 Applicability 19.3 Part 70 Permit Applications 19.4 Part 70 Permit Content 19.5 Permit Issuance, Renewal, Re-openings, and Revisions 19.6 Permit Renewal by the EPA and Affected States 19.7 Fee Determination and Certification	N/A	entire source
21. Acid Rain Permits	all subsections	no	entire source
22. Acid Rain Continuous Emissions Monitoring	all subsections	no	entire source
24. Sampling and Testing - Records and Reports (Through June 30, 2010)	24.1 Requirements for installation and maintenance of sampling and testing facilities 24.2 Requirements for emissions record keeping 24.3 Requirements for the record format 24.4 Requirements for the retention of records by the emission sources	yes	entire source
25. Affirmative Defense for Excess Emissions due to Malfunctions, Startup and Shutdown	applicable subsections	yes	entire source
26. Emission of Visible Air Contaminants	26.1 Limit on opacity ($\leq$ 20 percent for 3 minutes in a 60-minute period)	yes	entire source
28. Fuel Burning Equipment	Emission Limitations for PM	yes	entire source
29. Sulfur Contents of Fuel Oil	Sulfur content shall be equal to or less than 0.05 percent sulfur by weight	no	fire pump
40. Prohibitions of Nuisance Conditions	40.1 Prohibitions	no	entire source
41. Fugitive Dust	41.1 Prohibitions	yes	entire source
42. Open Burning	42.2	no	entire source
43. Odors In the Ambient Air	43.1 Prohibitions coded as Section 29	no	entire source

49. Compliance Requirements For Boilers and Steam Generators	Local enforcement only all subsections	no	auxiliary boiler
55. Preconstruction Review for New or Modified Stationary Sources in the 8-hour Ozone Nonattainment Area (Through June 30, 2010)	all subsections	no	entire source
60. Evaporation and Leakage	all subsections	yes	entire source
70. Emergency Procedures	all subsections	yes	entire source
80. Circumvention	all subsections	yes	entire source
81. Provisions of Regulations Severable	all subsections	yes	entire source

AQR SECTION 11 - AMBIENT AIR QUALITY STANDARDS *(in part)*

Table V-A-3: PSD Increment Consumption

Pollutant	Averaging Period	PSD Increment Consumption by the Source (µg/m^3)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO_2	3-hour	98.58[1]	648882	3941952
SO_2	24-hour	3.53[1]	648882	3941952
SO_2	Annual	0.85	648882	3941952
PM_{10}	24-hour	9.15[1]	648882	3941952
PM_{10}	Annual	2.24	648882	3941952
NO_x	Annual	0.48	648882	3941952

[1]Modeled 2nd High Concentration

The above table shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

B. Federally Applicable Regulations

40 CFR 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES:

Subpart A – General Provisions

40 CFR 60.7 – Notification and record keeping

Discussion: This regulation requires notification to DAQEM of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring device, CEMS data, and performance test data. These requirements are found in the Part 70 OP. DAQEM requires records to be maintained for five years, a more stringent requirement than the two years required by 40 CFR 60.7.

40 CFR 60.8 – Performance tests

Discussion: These requirements are found in the Part 70 OP in Section IV-D. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. DAQEM requirements

for initial performance testing are identical to AQR Section 60.8. DAQEM also requires periodic performance testing on emission units based upon throughput or usage. More discussion is in this document under the compliance section.

40 CFR 60.11 – Compliance with standards and maintenance requirements

Discussion: Compliance with various applicable standards will be demonstrated by performance tests unless otherwise specified in the standard. The source is subject to 40 CFR 60 Subpart GG which requires fuel monitoring and sampling to meet a standard. Subpart GG requirements are addressed in the Part 70 OP. AQR Section 26 is more stringent than the federal opacity standards, setting a maximum of 20 percent opacity for a period of more than 6 consecutive minutes. Walter M. Higgins III Generating Station shall operate in a manner consistent with this section of the regulation.

40 CFR 60.12 – Circumvention

Discussion: This prohibition is addressed in the Part 70 OP. This is also local rule AQR 80.1.

40 CFR 60.13 – Monitoring requirements

Discussion: This section requires that CEMS meet 40 CFR 75 Appendix B and 40 CFR 60 Appendix F standards of operation, testing and performance criteria. The Part 70 OP contains the CEMS conditions and citations to 40 CFR 75 Appendix B and 40 CFR 60 Appendix F. In addition, the QA plan approved for the CEMS follows the requirements outlined including span time and recording time.

Subpart Da – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978

40 CFR 60.40Da – Applicability

Discussion: The duct burners (EUs: A02 and A04) are subject to the provisions of this subpart. They each have a rated capacity of 700 MMBtu/hr.

40 CFR 60.42Da – Standard for Particulate Matter

Discussion: The manufacturer's performance data for the duct burners states that particulate emissions from the combustion of natural gas will yield 0.01 pounds per MMBtu, which is more stringent than the 0.03 pounds per MMBtu NSPS standard. Walter M. Higgins III Generating Stations shall be in compliance with this regulation. The Part 70 OP states that visible emissions from each stationary gas turbine/duct burner stack shall not exceed twenty (20) percent opacity for a period of more than 6 consecutive minutes. This is more stringent than the NSPS limits.

40 CFR 60.43Da – Standard for Sulfur Dioxide

Discussion: The manufacturer's performance data for the duct burners states that sulfur dioxide from the combustion of natural gas will yield 0.0006 pounds per MMBtu, which is more stringent than the NSPS standard. Walter M. Higgins III Generating Station will be in compliance with this standard.

40 CFR 60.44Da – Standard for Nitrogen Oxides

Discussion: According to the manufacturer, the duct burners operate at a full load input of 700 MMBtu per hour (HHV) each and will contribute approximately 25.7 pounds per

hour of NO_X emissions each, less than the NSPS standard. The emission rate per duct burner can be calculated as follows:

25.7 pounds/hour / 700 MMBtu/hr = 0.04 pounds NO_X per MMBtu

Walter M. Higgins III Generating Station shall be in compliance with this standard.

40 CFR 60.48Da – Compliance Provisions

Discussion: Walter M. Higgins III Generating Station has separate emission standards during startup and shutdown. They are outlined in the Part 70 operating permit. Walter M. Higgins III Generating Station has completed all compliance demonstrations and has demonstrated compliance with all applicable emission standards for NO_X and SO_2. They also employ the use of CEMS on each of the stationary gas turbine stacks to monitor NO_X emissions. The measurements to be taken are outlined in the Part 70 OP.

40 CFR 60.49Da – Emissions Monitoring

Discussion: The duct burners combust only natural gas; therefore, COMS and SO_2 CEMS are not required. Walter M. Higgins III Generating Station is subject to the requirements of 40 CFR 75; therefore, the data acquired by the NO_X CEMS are allowed to be used to show compliance with both 40 CFR 60 Subpart Da and 40 CFR 75. The reporting requirements are outlined in the Part 70 OP. Also, the source has installed a diluent oxygen CEMS. The duct burners exhaust through the same stack as the combustion turbines; therefore, the monitors required for monitoring stationary gas turbine emissions will also monitor duct burner emissions. Monitoring requirements are outlined in the Part 70 OP.

40 CFR 60.50Da – Compliance Determination Procedures and Methods

Discussion: The compliance demonstration for this source is discussed in the Part 70 OP.

40 CFR 60.51Da – Reporting Requirements

Discussion: Reporting requirements are discussed in the Part 70 OP.

Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR 60.40c – Applicability and Delegation of Authority

Discussion: The auxiliary boiler is rated at 40 MMBtu/hr; therefore, Subpart Dc is applicable to this unit.

40 CFR 60.42c – Standard for Sulfur Dioxide

Discussion: This section does not pertain to boilers that exclusively fire natural gas.

40 CFR 60.43c – Standard for Particulate Matter

Discussion: This section does not pertain to boilers that exclusively fire natural gas.

40 CFR 60.48c – Reporting and Recordkeeping Requirements

Discussion: Reporting and Recordkeeping Requirements are addressed in the Part 70 OP.

Subpart GG – Standards of Performance for Stationary Gas Turbines

40 CFR 60.330 – Applicability and designation of affected facility

Discussion: Subpart GG applies to the two stationary gas turbines at this source.

40 CFR 60.332 – Standard for nitrogen oxides

Discussion: See Table VI-D-1 of this document.

40 CFR 60.333 – Standard for sulfur dioxide

Discussion: See Table VI-D-1 of this document.

40 CFR 60.334 – Monitoring of operations

Discussion: The requirements are stipulated in the Part 70 OP. Sulfur content shall be verified annually and based on data from the gas supplier.

40 CFR 60.335 – Test methods and procedures

Discussion: These requirements are found in the conditions for performance testing found in the Part 70 OP.

Subpart KKKK – Standards of Performance for Stationary Combustion Turbines

Subpart KKKK does not apply to the turbines at this source because the turbines did not commence construction, modification, or reconstruction after February 18, 2005.

40 CFR 63-NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES:

Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 63.6585 – Applicability

Discussion: Subpart ZZZZ applies to the 500 hp emergency fire pump engine at this source.

40 CFR 63.6595 – Date of Compliance

Discussion: The emergency diesel fire pump must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

40 CFR 63.6603 – Emission Limitations and Operating Limitations

Discussion: The requirements are stipulated in the Part 70 OP.

40 CFR 63.6625 – Monitoring, Installation, Collection, Operation and Maintenance Requirements

Discussion: The source must install a non-resettable hour meter if one is not already installed. The source must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

40 CFR 64 – COMPLIANCE ASSURANCE MONITORING

40 CFR 64.2 – Applicability

Discussion: CAM requirements contained in 40 CFR 64 are only applicable for an emission when that unit meets all of the following:

- The unit must be located at a major source for which a Part 70 or 71 permit is required.
- The unit must be subject to an emission limitation or standard.
- The unit must have uncontrolled potential emissions of at least 100 percent of the major source amount.
- The unit must use a control device to achieve compliance.

Additionally, certain exemptions under the CAM rule apply to those unit that are subject to requirements and compliance demonstration provisions under Titles IV and V to the Clean Air Act (CAA).

Stationary Gas Turbines/Duct Burners (EUs: A01/A02 and A03/A04)

Pursuant to 40 CFR 64.2(b)(1)(iii), NO_X emissions are exempt from CAM requirements because acid rain program requirements are applicable. Pursuant to 40 CFR 64.2(b)(1)(vi), CO emissions are exempt because CO CEMS requirements are included in the Title V permit. EUs: A01/A02 and A03/A04 do not have any control device for PM_{10} or SO_2 and the uncontrolled potential VOC emissions are less than the major source threshold. Therefore, EUs: A01/A02 and A03/A04 do not meet the CAM applicability criteria described above for PM_{10}, VOC or SO_2.

Auxiliary Boiler and Fire Pump (EUs: A05 and A06)

The uncontrolled potential emissions of each regulated air pollutant from the auxiliary boiler and fire pump are less than the major source threshold. Therefore, the CAM requirements do not apply for any regulated pollutant.

40 CFR 72 – ACID RAIN PERMITS REGULATION

Subpart A – Acid Rain Program General Provisions

40 CFR 72.6 – Applicability

Discussion: Walter M. Higgins III Generating Station is defined as a utility unit in the definitions of 40 CFR 72; therefore, the provisions of this regulation apply.

40 CFR 72.9 – Standard Requirements

Discussion: Walter M. Higgins III Generating Station has applied for all of the proper permits under this regulation.

Subpart B – Designated Representative

Discussion: Walter M. Higgins III Generating Station has a Certificate of Representation for Designated Representative on file. They have fulfilled all requirements under this Subpart.

Subpart C – Acid Rain Permit Applications

Discussion: Walter M. Higgins III Generating Station has applied for an acid rain permit.

Subpart D – Acid Rain Compliance Plan and Compliance Options

Discussion: This Subpart discusses the individual requirements necessary for a complete compliance plan. A compliance plan exists for each stationary combustion turbine.

Subpart E – Acid Rain Permit Contents

Discussion: Walter M. Higgins III Generating Station has applied for an acid rain permit and it will contain all information necessary to demonstrate compliance with this Subpart.

40 CFR 73 – ACID RAIN SULFUR DIOXIDE ALLOWANCE SYSTEM

Discussion: Walter M. Higgins III Generating Station is an affected source pursuant to 40 CFR 72.6 because it fits the definition of a utility unit; therefore, this regulation shall apply.

Subpart B – Allowance Allocations

Discussion: Walter M. Higgins III Generating Station is not listed on either Phase I or Phase II tables because it is a newer power plant; therefore, it will not have an initial allocation per 40 CFR 73.10.

Subpart C – Allowance Tracking System

Discussion: A complete certificate of representation has been received and an account has been established for this source. Walter M. Higgins III Generating Station shall follow all guidelines and instructions presented in this Subpart while maintaining its allowance account.

Subpart D – Allowance Transfers

Discussion: When an allowance transfer is necessary, Walter M. Higgins III Generating Station shall follow all procedures in this Subpart.

Subpart E – Auctions, Direct Sales and Independent Power Producers Written Guarantee

Discussion: This Subpart outlines the auction process for allowance credits.

Subpart F – Energy Conservation and Renewable Energy Reserve

Discussion: There are no qualified conservation measures or renewable energy generation processes at this source; therefore, this Subpart does not apply.

40 CFR 75 – CONTINUOUS EMISSION MONITORING

Discussion: Walter M. Higgins III Generating Station is subject to the Acid Rain emission limitations of 40 CFR 72; therefore, the facility is subject to the monitoring requirements of this regulation.

Each stationary gas turbine/duct burner has been equipped with a NO_X CEMS and a diluent oxygen monitor. Each stationary gas turbine is also equipped with a fuel flow monitor. The data from the CEMS is used to provide quarterly acid rain reports to both EPA and DAQEM.

All required monitoring plans, RATA testing protocols and certification testing reports have been provided to EPA and DAQEM. Initial CEMS certification testing was

completed on November 23, 2003. The CEMS Quality Assurance Plan was submitted to DAQEM on February 12, 2003 and approved on August 11, 2003.

VI. COMPLIANCE

A. Compliance Certification

19.3.3.9 Requirements for compliance certification:

(a) Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to the DAQEM shall be as follows:

Table VI-A-1: Reporting Schedule

Required Report	Applicable Period	Due Date[1]
Semi-annual Report for 1st Six-Month Period	January, February, March, April, May, June	July 30 each year
Semi-annual Report for 2nd Six-Month Period, any additional annual records required	July, August, September, October, November, December	January 30 each year
Annual Compliance Certification Report	12 Months	30 days after the Operating Permit issuance anniversary date
Annual Emission Inventory Report	Calendar Year	March 31 each year
Excess Emission Notification	As Required	Within 24 hours of the time the Permittee first learns of the excess emissions
Excess Emission Report	As Required	Within 72 hours of the Excess Emission Notification
Deviation Report	As Required	Along with semi-annual reports
Performance Testing	As Required	Within 60 days from the end of the test

[1] Each report shall be received by DAQEM on or before the due date listed. If the due date falls on a Saturday, Sunday or a Federal or Nevada holiday, then the submittal is due on the next regularly scheduled business day.

(b) A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.
(c) A schedule for submission of compliance certifications during the permit term.
(d) A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

B. Compliance Summary

Table VI-B-1: AQR Applicable to Walter M. Higgins III Generating Station

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 0	Definitions	Applicable – Walter M. Higgins III Generating Station will comply with all applicable definitions as they apply.	Walter M. Higgins III Generating Station will meet all applicable test methods should new definitions apply.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 4	Control Officer	Applicable – The Control Officer or his representative may enter into Walter M. Higgins III Generating Station property, with or without prior notice, at any reasonable time for purpose of establishing compliance with permit regulations	Walter M. Higgins III Generating Station will allow Control Officer to enter property as required.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 11	Ambient Air Quality Standards	Applicable – Walter M. Higgins III Generating Station is a source of air pollutants.	Walter M. Higgins III Generating Station demonstrated compliance in the ATC permit application with air dispersion modeling.	Walter M. Higgins III Generating Station complies with applicable requirements.
Through June 30, 2010: AQR Section 12.1 (Amended 10/07/04)	General application requirements for construction of new and modified sources of air pollution	Applicable – Walter M. Higgins III Generating Station applied for and the ATC certificate was issued before commencing construction.	Walter M. Higgins III Generating Station received the ATC permit to construct.	Walter M. Higgins III Generating Station complies with applicable requirements.
Through June 30, 2010: AQR Section 12.2.5 (Amended 10/07/04)	Requirements for specific air pollutants: PM_{10} emission source located in the PSD area	Applicable – Walter M. Higgins III Generating Station is a major source of PM_{10} emissions.	The Walter M. Higgins III Generating Station stationary gas turbines meet BACT requirements as applicable for Hydrographic Basin 164A. The Part 70 permit has relevant compliance, record keeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements for PM_{10}.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
Through June 30, 2010: AQR Section 12.2.10 (Amended 10/07/04)	Requirements for specific air pollutants: Major CO emission source located in the PSD area.	Applicable – Walter M. Higgins III Generating Station is a major CO source with CO emission units located in Hydrographic Basin 164A.	The Walter M. Higgins III Generating Station CO controls meet BACT as applicable for Hydrographic Basin 164A. The Part 70 permit has relevant compliance, record keeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable control technology requirements for CO.
Through June 30, 2010: AQR Section 12.2.11 (Amended 10/07/04)	Requirements for specific air pollutants: Minor VOC sources located in the VOC Management Area.	Applicable – Walter M. Higgins III Generating Station is a minor VOC source with VOC emissions units located in Hydrographic Basin 212.	The Walter M. Higgins III Generating Station VOC controls meet BACT as applicable for Hydrographic Basin 164A. The Part 70 permit has relevant compliance, record keeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable control technology requirements for VOC.
Through June 30, 2010: AQR Section 12.2.14 (Amended 10/07/04)	Requirements for specific air pollutants: NO_X sources located in the NO_X Management Area.	Applicable – Walter M. Higgins III Generating Station has NO_X PTE > 50 TPY.	The Walter M. Higgins III Generating Station NO_X controls meet BACT as applicable for Hydrographic Basin 164A. The Part 70 permit has relevant compliance, record keeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable control technology requirements for NO_X.
Through June 30, 2010: AQR Section 12.2.16 (Amended 10/07/04)	Requirements for specific air pollutants: SO_X sources located in the PSD area.	Applicable – Walter M. Higgins III Generating Station is a minor SO_X source with SO_X emission units located in Hydrographic Basin 164A.	The Walter M. Higgins III Generating Station stationary gas turbines meet BACT as applicable for Hydrographic Basin 164A. The Part 70 permit has relevant compliance, record keeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable control technology requirements for SO_X.
Through June 30, 2010: AQR Section 12.5 (Amended 10/07/04)	Air Quality Models	Applicable – Dispersion modeling will be performed as required for any future major modifications.	As applicable, if any future dispersion modeling is performed in response to a request for any ATC permit modifications, it will be in accordance with provisions of 40 CFR 51, Appendix W.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
Through June 30, 2010: AQR Section 12.7 (Amended 10/07/04)	Continuous Emission Monitoring Systems	Applicable – The Walter M. Higgins III Generating Station has NO_x PTE > 40 TPY and a CO PTE > 100 TPY. NO_x and CO CEMS installed on all applicable stacks and meets provisions of 40 CFR 60 and 75.	Walter M. Higgins III Generating Station submitted all required protocols/test plans per the issued ATC permit prior to CEMS certification. CEMS certification was approved by DAQEM.	Walter M. Higgins III Generating Station complies with applicable requirements.
Beginning July 1, 2010: AQR Section 12.5	Part 70 Operating Permits	Applicable – Walter M. Higgins III Generating Station is a major stationary source and under Part 70. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months of commencing operation of the new emission unit.	Walter M. Higgins III Generating Station submitted the initial Part 70 permit application within 12 months of startup. The renewal application was submitted within the appropriate timeframe.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 13.2.85 Subpart ZZZZ	NESHAP – Stationary Reciprocating Internal Combustion Engines	Applicable – The Walter M. Higgins III Generating Station fire pump is an affected unit.	Applicable monitoring requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 14.1.1 Subpart A	NSPS – General Provisions	Applicable – Walter M. Higgins III Generating Station is an affected facility under the regulations. Sec. 14 is locally enforceable; however, the NSPS standards they reference are federally enforceable.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 14.1.9 Subpart Da	NSPS – Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978	Applicable – The Walter M. Higgins III Generating Station duct burners are natural gas fired units with heat input greater than 250 MMBtu/hr.	All duct burners meet the applicable PM, SO_2 and NO_x emission standards. The duct burners also meet the opacity requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 14.1.11 Subpart Dc	NSPS – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Applicable – The Walter M. Higgins III Generating Station auxiliary boiler is a natural gas fired units with heat input greater than 10 MMBtu/hr.	The auxiliary boiler will meet the appropriate requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 14.1.46 Subpart GG	NSPS – Standards of Performance for Stationary Gas Turbines	Applicable – The Walter M. Higgins III Generating Station stationary gas turbines are natural gas fired units with heat input greater than 10 MMBtu/hr.	All stationary gas turbines meet the applicable NO_x emission standard. When firing on natural gas, NO_x emissions shall not exceed 2.5 ppmv (dry, corrected to 15 percent oxygen). NO_x emissions determined by EPA Method 7E.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 16	DAQEM Operating Permits	Applicable – Walter M. Higgins III Generating Station must apply for and obtain a DAQEM operating permit prior to operation.	Walter M. Higgins III Generating Station applied for and received operating permit from DAQEM prior to commercial operation.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 18	Permit and Technical Service Fees	Applicable – Walter M. Higgins III Generating Station will be required to pay all required/applicable permit and technical service fees.	Walter M. Higgins III Generating Station is required to pay all required/applicable permit and technical service fees.	Walter M. Higgins III Generating Station complies with applicable requirements.
Through June 30, 2010: AQR Section 19	40 CFR 70 Operating Permits	Applicable – Walter M. Higgins III Generating Station is a major stationary source and under Part 70 the initial Title V permit application will be submitted within 12 months of startup. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months of commencing operation of the new emission unit. Section 19 is both federally and locally enforceable.	Walter M. Higgins III Generating Station submitted the initial Part 70 permit application within 12 months of startup. The renewal application was submitted within the appropriate timeframe.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 21	Acid Rain Permits	Applicable – Walter M. Higgins III Generating Station is an affected facility. The stationary combustion turbines are applicable under the Acid Rain Program.	Walter M. Higgins III Generating Station submitted required acid rain permit forms/applications.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 22	Acid Rain Continuous Emission Monitoring	Applicable – Walter M. Higgins III Generating Station an affected facility and is required to meet the requirements for the monitoring, recordkeeping and reporting of flow rate.	Walter M. Higgins III Generating Station submitted all required protocols/test plans per ATC prior to CEMS certification.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 25	Upset/Breakdown, Malfunctions	Applicable – Any upset, breakdown, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to Control Officer. Section 25.1 is locally and federally enforceable.	Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within 1-hour of onset of such event.	The Walter M. Higgins III Generating Station currently complies with applicable requirements.
AQR Section 26	Emissions of Visible Air Contaminants	Applicable – Opacity for the any emission unit may not exceed 20 percent for more than 6 consecutive minutes.	Compliance determined by EPA Method 9.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 28	Fuel Burning Equipment	Applicable – The PM emission rates for all stationary gas turbines are well below those established based on Section 28 requirements.	Maximum allowable PM emission rate determined from equation in Section 28.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 29	Sulfur Content of Fuel Oil	Applicable – If fuel oil is used it must be low sulfur fuel with sulfur content less than 0.05 percent by weight. Section 29 is locally enforceable only.	Fuel sulfur content verification obtained from fuel oil supplier.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 40	Prohibition of Nuisance Conditions	Applicable – No person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance. Section 40 is locally enforceable only.	Walter M. Higgins III Generating Station air contaminant emissions controlled by pollution control devices or good combustion and thus will not cause a nuisance.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 41	Fugitive Dust	Applicable – Walter M. Higgins III Generating Station shall take necessary actions to abate fugitive dust from becoming airborne.	Walter M. Higgins III Generating Station utilizes appropriate best practices to not allow airborne fugitive dust.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 42	Open Burning	Applicable – In event Walter M. Higgins III Generating Station burns combustible material in any open areas, such burning activity will have been approved by Control Officer in advance. Section 42 is a locally enforceable rule only.	Walter M. Higgins III Generating Station will contact the DAQEM and obtain approval in advance for applicable burning activities as identified in the rule.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 43	Odors in the Ambient Air	Applicable – An odor occurrence is a violation if the Control Officer is able to detect the odor twice within a period of an hour, if the odor causes a nuisance, and if the detection of odors is separated by at least 15 minutes. Section 43 is a local enforceable rule only.	Walter M. Higgins III Generating Station is a predominantly natural gas-fired facility and is not expected to cause odors.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 49	Emission Standards for Boilers and Steam Generators Burning Fossil Fuels	Applicable – The auxiliary boiler at Walter M. Higgins III Generating Station is applicable to the requirements of Section 49.	Walter M. Higgins III Generating Station submitted required test protocols prior to initial performance testing. Tests reported within 60 days. DAQEM approves test reports.	Walter M. Higgins III Generating Station complies with applicable requirements.
Through June 30, 2010: AQR Section 55	Preconstruction review for New or Modified Stationary Sources in the 8-Hour Ozone Nonattainment Area	Applicable – Walter M. Higgins III Generating Station is located in Hydrographic area 164A and will need to meet the applicable emission control requirements at times of future modifications.	In the event Walter M. Higgins III Generating Station undertakes any modification, the facility will have to apply proper control technologies and meet offset requirements as applicable.	Walter M. Higgins III Generating Station complies with applicable requirements.
AQR Section 70.4	Emergency Procedures	Applicable – Walter M. Higgins III Generating Station submitted an emergency standby plan for reducing or eliminating air pollutant emissions in the Section 16 Operating Permit Application.	Walter M. Higgins III Generating Station submitted an emergency standby plan and received the Section 16 Operating Permit.	Walter M. Higgins III Generating Station complies with applicable requirements.

Table VI-B-2: Federal Air Quality Regulations Applicable to Walter M. Higgins III Generating Station

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)	Applicable – Walter M. Higgins III Generating Station PTE > 100 TPY and is listed as one of the 28 source categories.	BACT analysis, air quality analysis using modeling, and visibility and additional impact analysis performed for original ATC permits.	Walter M. Higgins III Generating Station complies with applicable sections as required by PSD regulations.
40 CFR Part 52.1470	SIP Rules	Applicable – Walter M. Higgins III Generating Station is classified as a Title V source, and SIP rules apply.	Applicable monitoring and record keeping of emissions data.	Walter M. Higgins III Generating Station is in compliance with applicable state SIP requirements including monitoring and record keeping of emissions data.
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources (NSPS) – General Provisions	Applicable – Walter M. Higgins III Generating Station is an affected facility under the regulations.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 60, Subpart Da	Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978	Applicable – The Walter M. Higgins III Generating Station stationary gas turbines are applicable subject to the requirements of this Subpart.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Applicable – The Walter M. Higgins III Generating Station auxiliary boiler is subject to the requirements of this Subpart.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 60, Subpart GG	Standards of Performance for New Stationary Sources (NSPS) – Stationary Gas Turbines	Applicable – The Walter M. Higgins III Generating Station stationary gas turbines are natural gas- fired units with heat input greater than 10 MMBtu/hr.	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 60	Appendix A, Method 9 or equivalent, (Opacity)	Applicable – Emissions from stacks are subject to opacity standards.	Opacity determined by EPA Method 9.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 63, Subpart ZZZZ	Emission Standards for Hazardous Air Pollutants	Applicable – The Walter M. Higgins III Generating Station diesel emergency fire pump is subject to the requirements of this subpart	Applicable monitoring, recordkeeping and reporting requirements.	Walter M. Higgins III Generating Station must be in compliance with the applicable requirements on and after May 3, 2013.
40 CFR Part 64	Compliance Assurance Monitoring	Not Applicable – Walter M. Higgins III Generating Station has CEMS to monitor NO_x and CO emissions.	Walter M. Higgins III Generating Station continuously monitors NO_x and CO missions with CEMS.	Not Applicable.
40 CFR Part 70	Federally Mandated Operating Permits	Applicable – Walter M. Higgins III Generating Station is a major stationary source and under Part 70 the initial Title V permit application was submitted as required. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months or commencing operation of any new emission unit.	Walter M. Higgins III Generating Station submitted a renewal application on May 7, 2009. Applications for new units will be submitted within 12 months of startup.	Walter M. Higgins III Generating Station complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 72	Acid Rain Permits Regulation	Applicable – Walter M. Higgins III Generating Station is applicable to the requirements under this regulation.	Walter M. Higgins III Generating Station has submitted the required application and notifications.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 73	Acid Rain Sulfur Dioxide Allowance System	Applicable – Walter M. Higgins III Generating Station is applicable to the requirements under this regulation.	Walter M. Higgins III Generating Station will obtain SO_2 allowances based on the actual emissions recorded annually by the CEMS.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 75	Acid Rain CEMS	Applicable – Walter M. Higgins III Generating Station is applicable to the requirements under this regulation.	Walter M. Higgins III Generating Station will comply with all monitoring, recordkeeping and reporting for SO_2, NO_X and CO_2 emissions and flow rate from affected units under the Acid Rain Program.	Walter M. Higgins III Generating Station complies with applicable requirements.
40 CFR Part 82	Protection of Stratospheric Ozone	Applicable – Walter M. Higgins III Generating Station is subject to stratospheric ozone regulations based on 40 CFR 82.4.	Applicable.	Applicable.

C. Permit Shield

A permit shield was not requested by the source.

D. Streamlining Demonstration

Table VI-D-1: 40 CFR 60 Subparts Da, Dc and GG Streamlining Demonstration

EU	Regulation (40 CFR)	Regulatory Standard	Permit Limit	Value Comparison (in Units of the Permit Limit)			Averaging Period Comparison			Streamlining Statement for Shielding Purposes
				Standard Value	Permit Limit Value	Is Permit Limit Equal or More Stringent ?	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent ?	
A01/ A02	60.332	75 ppmvd	2.5 ppmvd	75 (1)	2.5	Yes	4 hour	3 hour	Yes	The permit limits are

EU	Regulation (40 CFR)	Regulatory Standard	Permit Limit	Value Comparison (in Units of the Permit Limit)			Averaging Period Comparison			Streamlining Statement for Shielding Purposes
				Standard Value	Permit Limit Value	Is Permit Limit Equal or More Stringent ?	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent ?	
A03/ A04	(GG)	NO_x @ 15% O_2 [(1)]	NO_x @ 15% O_2							more stringent than the standard based upon both concentration and averaging time. Compliance with the permit demonstrates compliance with the standard.
A01/ A02 A03/ A04	60.333 (GG)	150 ppmvd (326 lbs/hr) SO_X @ 15% O_2	1.68 lbs/hr SO_X @ 15% O_2 (natural gas)	326	1.68	Yes	4 hour	3 hour	Yes	
A01/ A02 A03/ A04	60.333 (GG)	0.8% Sulfur by weight (280 gr/100 scf)	0.75 gr/100 scf	280	0.75	Yes	4 hour	rolling 12-month	Yes	
A01/ A02 A03/ A04	60.42 (Da)	0.03 lb PM/MMBtu	21.10 lbs PM_{10}/hr	83.88	21.10	Yes	30-day rolling	1 hour	Yes	The permit limits are more stringent than the standard based upon both concentration and averaging time. Compliance with the permit demonstrates compliance with the standard.
A01/ A02 A03/ A04	60.42 (Da)	20% Opacity	20% Opacity	20	20	Yes	60-minute period, excepting 6 minutes	60-minute period, excepting 6 minutes	Yes	
A01/ A02 A03/ A04	60.43 (Da)	0.20 lb SO_2/MMBtu	1.68 lb SO_2/hr	622.20	1.68	Yes	30-day rolling	1 hour	Yes	
A01/ A02 A03/ A04	60.44 (Da)	0.20 lb NO_X/MMBtu	2.5 ppm NO_X @ 15% O_2	54	2.5	Yes	30-day rolling	1 hour	Yes	
A01/ A02 A03/ A04	60.44 (Da)	1.6 lb NO_X/MW-hr	25.70 lb NO_X/hr	280	25.70	Yes	30-day rolling	1 hour	Yes	

[1] The 40 CFR 60.332 NO_x standard is the following formula: STD = 0.0075 * (14.4)/Y + F; the calculated value (75 ppmvd) is the minimum possible value of the standard for any emission unit.

Where:

STD = allowable ISO corrected NO_X emission concentration (percent by volume at 15 percent oxygen and on a dry basis);

Y = manufacturer's rated heat at manufacturer's rated load or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour (for the purposes of obtaining the minimum possible value of the standard, Y = 14.4; and

F = NO_X emission allowance for fuel-bound nitrogen (N = the nitrogen content of the fuel). For the purposes of obtaining the minimum possible value of the standard, F = 0.

Fuel-bound nitrogen (percent by weight)	F (NO_X percent by volume)
N ≤ .015	0
0.015 < N≤ 0.1	0.04 (N)
0.1 < N ≤ 0.25	0.004+0.0067(N–0.1)
N > 0.25	0.005

[2] Sulfur content was converted from percent by weight to grains per 100 scf as follows: 0.8% sulfur = 56 gr sulfur per lb natural gas. AP-42 defines natural gas as generally more than 85 percent methane and varying amounts of ethane propane, butane, and inerts (typically nitrogen, carbon dioxide, and helium). Assuming an average molecular weight of 18 lb/lb-mol, 1 lb natural gas = 20 scf. Lastly, 56 grains sulfur per 20 scf natural gas = 280 gr/100 scf.

E. Summary of Monitoring for Compliance

Table VI-E-1: Summary of Monitoring for Compliance

Emission Unit	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
A01 & A03	Stationary Gas Turbines	CO, NO_x, SO_2, PM_{10}, VOC, HAPs	AQR Sections 12 (Amended 10/07/04), 12.5, 19, and 55 40 CFR 60 Subpart GG	Annual and short-term emission limits.	CEMS for NO_x and CO. Stack testing for VOC, PM_{10} and opacity as outlined in Part 70 OP. Compliance for SO_2 and HAPs shall be based on sole use of natural gas as fuel and emission factors. Recording is required for compliance demonstration.
A01 & A03	Stationary Gas Turbines	Opacity	AQR Section 26	Less than twenty percent opacity.	Use of natural gas as fuel and good combustion practices as well as EPA Method 9 performance testing upon the request of the Control Officer.
A05	Auxiliary Boiler	CO, NO_x, SO_2, PM_{10}, VOC, HAPs	AQR Sections 12 (Amended 10/07/04), 19, 49 and 55 40 CFR 60 Subpart Dc	Annual and short-term emission limits.	Stack testing for NO_X and CO by EPA Methods as outlined in Part 70 OP. Compliance for PM_{10}, SO_2, VOC and HAPs shall be based on sole use of natural gas as fuel and emission factors. Recording is required for compliance demonstration.
A05	Auxiliary Boiler	Opacity	AQR Section 26	Less than twenty percent opacity.	Use of natural gas as fuel and good combustion practices as well as visual emission checks as outline in Part 70 OP.

Emission Unit	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
A06	Diesel Fire Pump	CO, NO_x, SO_2, PM_{10}, VOC, HAPs	AQR Sections 12 (Amended 10/07/04), 19, and 55 40 CFR Subpart ZZZZ	Annual and short-term emission limits.	Compliance for regulated pollutants shall be based on sole use of low-sulfur diesel fuel and emission factors. Recording is required for compliance demonstration.
A06	Diesel Fire Pump	Opacity	AQR Section 26	Less than twenty percent opacity.	Sole use of low-sulfur diesel fuel and quarterly visual emission checks as outlined in Part 70 OP.

VII. EMISSION REDUCTION CREDITS (OFFSETS)

The source has no federal offset requirements associated with this permitting action.

VIII. ADMINISTRATIVE REQUIREMENTS

AQR Section 19 requires that DAQEM identify the original authority for each term or condition in the Part 70 Operating Permit. Such reference of origin or citation is denoted by [italic text in brackets] after each Part 70 Permit condition.

DAQEM proposes to issue the Part 70 Operating Permit conditions on the following basis:

Legal:
On December 5, 2001 in Federal Register Volume 66, Number 234 FR30097 the EPA fully approved the Title V Operating Permit Program submitted for the purpose of complying with the Title V requirements of the 1990 CAAA and implementing 40 CFR 70.

Factual:
Walter M. Higgins III Generating Station has supplied all the necessary information for DAQEM to draft Part 70 Operating Permit conditions encompassing all applicable requirements and corresponding compliance.

Conclusion:
DAQEM has determined that Walter M. Higgins III Generating Station will continue to determine compliance through the use of CEMS, performance testing, quarterly reporting, daily recordkeeping, coupled with annual certifications of compliance. DAQEM proceeds with the preliminary decision that a Part 70 Operating Permit should be issued as drafted to Walter M. Higgins III Generating Station for a period not to exceed five years.